

### Solving Equations:

- 1)  $3x + 5 = 23$
- 2) The relationship between the temperature in degrees Fahrenheit  $F$  and degrees Celsius  $C$  is given by the formula  $F = \frac{9}{5}C + 32$ . Solve the formula for  $C$ .
- 3)  $4 - 3(3 + 4x) = -7(2x - 1) - 8$
- 4)  $\frac{3ax}{5} - 4c = \frac{ax}{5}$

### Solving Inequalities:

- 5)  $-2 + \frac{3(x-2)}{4} \leq -1$
- 6)  $2 - 3x \geq 7(8 - 2x) + 12$
- 7)  $5x - 4 > 16$  or  $3x + 2 < 17$
- 8) Consider the compound inequality  $x < 8$  and  $x > a$ .
  - a. Are there any values of  $a$  such that **all real numbers** are solutions of the compound inequality? If so, what are they?
  - b. Are there any values of  $a$  such that **no real numbers** are solutions of the compound inequality? If so, what are they?

### Solving Absolute Value:

- 9)  $|2x - 4| + 5 = 21$
- 10)  $\frac{2}{3}|3x - 6| = 4(x - 2)$
- 11)  $\left| \frac{(x-3)}{2} \right| + 2 < 6$
- 12)  $3|4x - 1| \geq 6(4 - x)$

SOLUTIONS to Equations:

- 1)  $x = 6$
- 2)  $C = \frac{5}{9}(F - 32)$
- 3)  $x = 2$
- 4)  $x = \frac{10c}{a}$

SOLUTIONS to Inequalities:

- 5)  $x \leq \frac{10}{3}$
- 6)  $x \geq 6$
- 7)  $x = \text{all Reals}$
- 8) **a.** no, there are not.  
**b.** yes, for values of  $a$  that are 8 or greater.

SOLUTIONS to Absolute Values:

- 9)  $x = -6, 10$
- 10)  $x = 2$
- 11)  $-5 < x < 11$
- 12)  $x \leq -\frac{7}{2}$  or  $\frac{3}{2} \leq x$